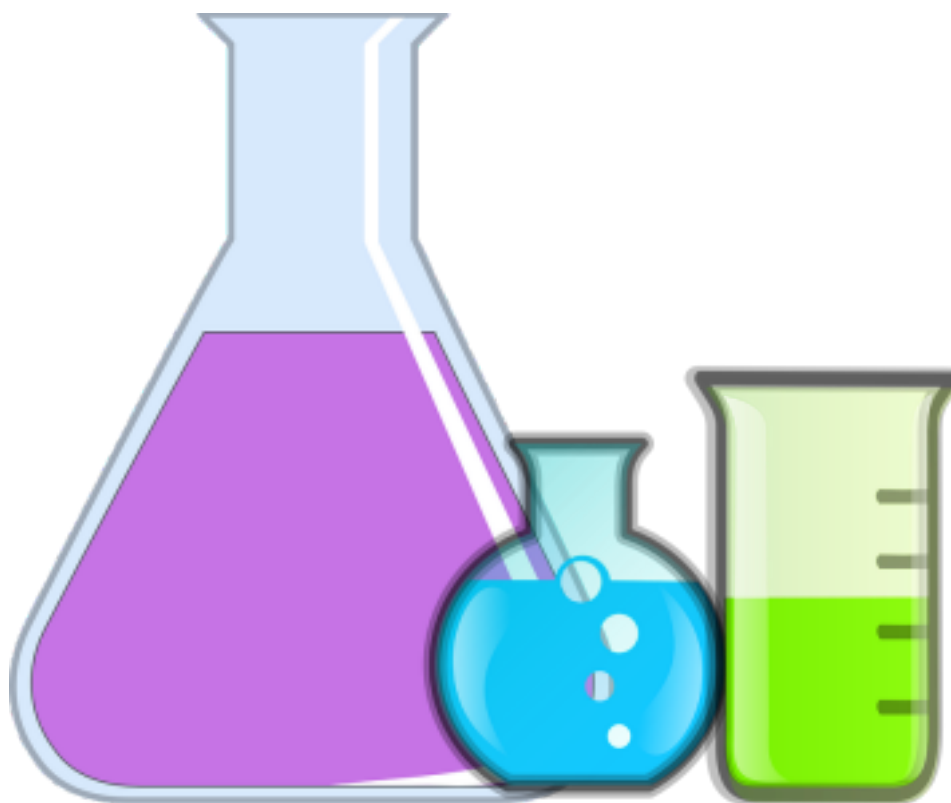


Sixth Form Induction

Chemistry IB Higher Level

Pre-course Preparation



Thank you for your interest in the subject. You will enjoy Chemistry as it is varied and interesting, but it is challenging, so it is good that you have got an opportunity to do some preparation in advance.

As a useful starting point for your studies in September, you should complete the following:

Task 1: The Atom Detectives

Background information: Since 5 BC, people have been curious to find out more about different materials and substances. The theory of Democritus said 'Substances are different because homogenous particles have different sizes and shapes and cannot be cut'. This was just the start of many more theories that would be put forward and then rejected over the next 2000 years. Many of the early theories of matter were not based upon experiments. As scientists began to study the relationship between physical phenomena such as electricity and magnetism they began to develop different models about atomic structure.

Task 1:

Download the article [The Atom Detectives](#) from the Royal Society of Chemistry (RSC).

This may require that you become a *member of the Royal Society of Chemistry*.

There are five student worksheets each featuring a scientist who made a significant contribution to the development of atomic theory.

- Dalton (page 8)
- Berzelius (page 9)
- Thomson (page 10)
- Rutherford (page 11)
- Bohr (page 12)

Use the information on the factsheets (alongside other sources, e.g. [Atomic theory timeline](#)) to:

- a. Produce a **poster** on the development of atomic theory.
- b. Completed the **questions on pages 13 and 14** on the modern atomic theory.

Task 2: Background reading

Choose one source from the recommended chemistry reading list below. I would recommend choosing one article from the archived mole magazine. Write a brief synopsis of what you found out (no more than 200 words)

Chemistry Reading List

It should be stressed that these lists are in no way exhaustive, students should seek to branch out from these suggestions in order to follow their own interests and passions. If you have any further suggestions then please let Mrs Moore know and she will add them to the list.

Inspirational Reading

Year 11 could use these titles to help with their sixth form choices.

Year 12 must read if studying this subject at sixth form

Books

- The Pleasure of Finding Things Out - Richard Feynman
- Periodic Tales - Hugh Aldersey-Williams
- The Disappearing Spoon - Sam Kean
- Uncle Tungsten - Oliver Sachs
- The Shocking History of Phosphorus: A Biography of the Devil's Element - John Emsley

Magazine/Journals

- [The Mole](#)
- [Chemistry World](#) (via free RSC membership)
- [Chemistry Review](#) (subscription required)

Websites

- [Periodic Table of Videos](#) by Martyn Poliakoff
- [Royal Society of Chemistry](#)
- [Institution of Chemical Engineers](#)
- [Chemguide](#)

Places of Interest

- | | |
|--|--------------------------|
| • Royal Society of Chemistry, London | • Science Museum, London |
| • Museum of the History of Science, Oxford | • Curie Museum, Paris |